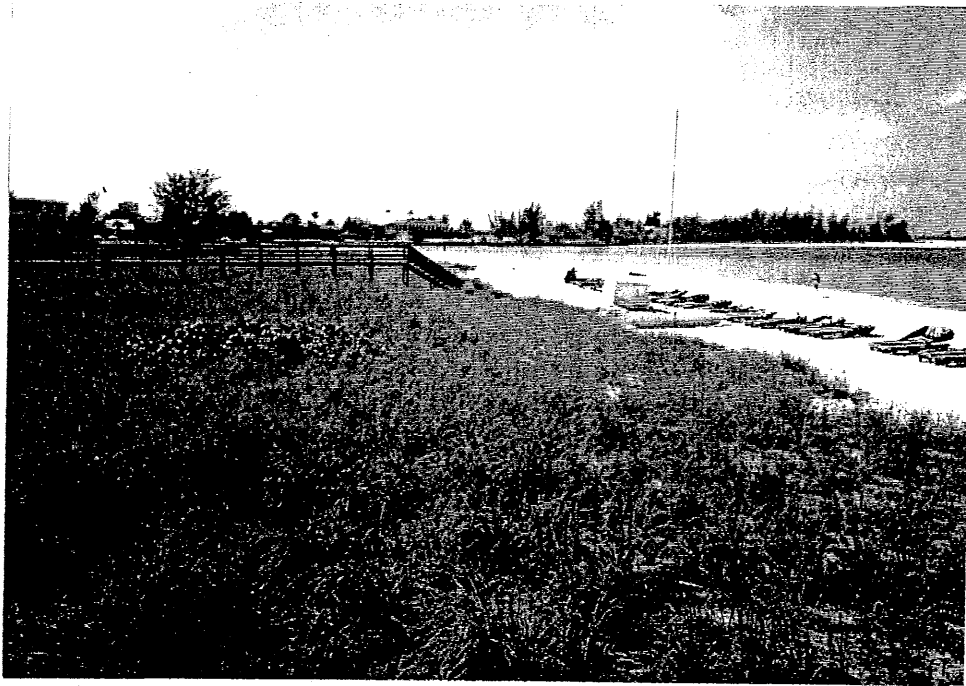


FIGURE 32

## HABITATS ADJACENT TO NEW PASS



Photograph No. 5

Sea oats (Uniola paniculata) dominate the dune system immediately north of New Pass.



Photograph No. 6

Dune vegetation along the southern portion of Lido Key consists primarily of sea oats (Uniola paniculata) and beach elder (Iva imbricata).

Table 16

Commonly Observed Dune Vegetation  
North of New Pass

<u>Scientific Name</u>	<u>Common Name</u>
<u>Sabal palmetto</u>	Cabbage palm
<u>Yucca aloifolia</u>	Spanish bayonet
<u>Baccharis halimifolia</u>	Groundsel tree
<u>Uniola paniculata</u>	Sea oats
<u>Coccoloba uvifera</u>	Sea grape
<u>Caesalpinia bonduc</u>	Grey nickerbean
<u>Panicum amarum</u>	Bitter panicum
<u>Scaevola sericea</u>	Beach naupaka
<u>Scaevola plumieri</u>	Inkberry
<u>Oenothera humifusa</u>	Seaside evening primrose
<u>Schinus terebinthifolius</u>	Brazilian pepper
<u>Spartina patens</u>	Marsh hay cordgrass

Based on Coastal Planning & Engineering, Inc. field survey conducted on May 13, 1992.

Segment I extends south from New Pass for approximately 3800 feet and generally encompasses the City-owned North Lido Public Beach. This segment is mostly undeveloped and extends from the Gulf of Mexico to Sarasota Bay. Although undeveloped, a majority of the upland habitat in this segment has been disturbed. The remaining upland vegetation includes both exotic and native species, including Australian pine, sand pine, sea grape and wax myrtle. Closer to the Gulf, a large area of native dune habitat is present. Dune vegetation in this area consists primarily of pioneer species such as salt grass, sand spur, wild bean, seaside spurge and sea oats. Except for the northernmost tip of Lido Key, the beaches in Segment I have not been artificially enriched with sand and have experienced historical fluctuations of erosion and accretion. These beaches serve as an important nesting habitat for least terns (Table 17) and snowy plovers (Perry, 1992).

Segment II lies within the public beach area at Lido Beach and extends for approximately 3200 feet. During recent history, the only native dune vegetation in this segment was an area of planted sea oats located in front of the pavilion. However, sea oats and other dune vegetation are now being planted by the County as part of an ongoing dune restoration project which is scheduled for completion in summer 1992. Supportive recreational facilities such as a bath house, parking lots, paths and a swimming pool are present. Additionally, the County has recently completed construction of wooden dune overwalks as part of the dune restoration project.

Since 1964, the shoreline in Segment II has been renourished with sand from New Pass on eight occasions. The width of the beach has fluctuated greatly between periods of sand placement. At times, the beach in this area has exhibited vertical escarpments near the water's edge ranging from 1 to 7 feet.

Segment III consists of privately-owned uplands and extends to the south for approximately 4,600 feet. The uplands have been fully developed and are occupied by hotels and condominiums. Due to development and beach erosion, there is little native vegetation remaining between the shoreline and buildings and/or seawalls. The sandy beach area is generally narrow, with some seawalls interacting with the water during storm events or periods of erosion. Although sand from the New Pass dredging is not directly placed along the beach in Segment III, the shoreline does benefit from the natural littoral drift of material from the beach in Segment II. The shoreline at Segment III experiences cyclical erosion and accretion.

Segment IV includes the county park (South Lido Park) and extends approximately 1300 feet, to Big Sarasota Pass. This area is largely undeveloped, except for recreational amenities such as picnic shelters, restrooms, parking areas and nature walks. Sparse fragments of sea oats and other native halophytic vegetation exist seaward of a cohesive stand of Australian pines located along the pass shoreline. In contrast, the Gulf beach/dune system is characterized by emerging dune vegetation (Photograph No. 6), mixed with scattered patches of Australian pine (Table 18). The Gulf shoreline fluctuates greatly in Segment IV, indicative of the boundary effects of a tidal inlet.

Table 17

Least Tern Nesting Records for  
North Lido Public Beach  
Sarasota County, Florida

Year	# of Nesting Pairs
1952	nesting but no numbers
1959	55
1960	30
1962	large colony (no numbers)
1963	150
1964	50
1965	30
1970	75
1977	nesting but no numbers
1982	25
1985	22
1986	50
1987	50
1988	20
1989	25
1990	40

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Data compiled by B. Perry, Sarasota County Natural Resources Department from the official records of the Sarasota Bird Club (1952-1963) and the Sarasota Chapter of the National Audubon Society (1964-1990).

Table 18

Commonly Observed Dune Vegetation  
on the Southern Portion of Lido Key

Scientific Name	Common Name
<u>Spartina patens</u>	Marsh hay cordgrass
<u>Scaevola sericea</u>	Beach naupaka
<u>Sabal palmetto</u>	Cabbage palm
<u>Cenchrus spp.</u>	Sandspur
<u>Oenothera humifusa</u>	Seaside evening primrose
<u>Canavalia rosea</u>	Seaside bean
<u>Conocarpus erectus</u>	Green buttonwood
<u>Coccoloba uvifera</u>	Sea grape
<u>Helianthus debilis</u>	Dune sunflower
<u>Uniola paniculata</u>	Sea oats
<u>Scaevola plumieri</u>	Inkberry
<u>Ipomoea pes-caprae</u>	Railroad vine
<u>Iva imbricata</u>	Beach elder
<u>Lippia nodiflora</u>	Carpetweed
<u>Casuarina equisetifolia</u>	Australian pine
<u>Solidago sempervirens</u>	Seaside goldenrod
<u>Sporobolus virginicus</u>	Seashore dropseed
<u>Uniola paniculata</u>	Sea oats
<u>Sesuvium portulacastrum</u>	Sea purslane
<u>Cakile lanceolata</u>	Sea rocket
<u>Paspalum vaginatum</u>	Seashore paspalum
<u>Baccharis halimifolia</u>	Groundsel tree
<u>Schinus terebinthifolius</u>	Brazilian pepper

Based on Coastal Planning & Engineering, Inc. field survey conducted on May 13, 1992.

Wildlife on both Lido and Longboat Keys is generally limited to small mammals, snakes, lizards and insects. A variety of shore and wading birds may also be encountered. Commonly observed species include brown pelicans, gulls, terns, plovers, sandpipers and small passerine species. Organisms inhabiting the beach zone include amphipods and various crabs, such as the common ghost crab. The beaches also provide nesting habitat for several threatened or endangered species including least terns, snowy plovers and sea turtles, primarily the loggerhead sea turtle (Caretta caretta). Historical sea turtle nesting statistics for southern Longboat Key and Lido Key are provided in Tables 19 and 20.

### C. Estuarine Wetlands - Sarasota Bay

This resource classification includes the tidal wetlands, submerged habitat and impounded wetlands within Sarasota Bay. Sarasota Bay, with the exception of two creek mouths, is designated as an Outstanding Florida Water (Estevez and Merriam, 1989). Sarasota Bay has also been designated under the National Estuary Program. The shallow estuarine waters within Sarasota Bay support fragmented patches of native vegetation, including mangrove areas, seagrass beds, algal beds and salt marshes (Figure 31). In addition, riprap and artificial reefs (Figure 31) within Sarasota Bay and New Pass provide habitat for varying amounts of hardbottom fauna (Mote Marine, personal communication).

Several viable seagrass and algal beds, as well as a few salt marshes currently exist in Sarasota Bay near New Pass. A recent draft report prepared by the National Estuary Program (NEP) estimates that approximately 7.2 acres of seagrass and epiphytic algae exist in the immediate vicinity of New Pass (Culter and Leverone, 1992). Approximately 1038 acres of seagrass exist from just north of the Pass, southward to the Siesta Key Bridge (Culter and Leverone, 1992). The NEP report suggests that the amount of seagrass habitat adjacent to New Pass has increased slightly in recent years (Culter and Leverone, 1992).

These seagrass and algal beds serve as both habitat and food source for a variety of organisms. In general, seagrass and algal beds serve as important nursery grounds for snapper, grouper, drum, shrimp and blue crab. Fishes, sea urchins, sea turtles and manatee feed on epiphytic algae and seagrasses. In turn, egrets, terns and herons forage upon the small crustaceans, gastropods, worms and fishes found in the tidal flats surrounding New Pass.

Fringing mangrove communities exist in the undeveloped areas within the tidal zone north and south of the pass. Red and black mangroves dominate those areas which are frequently inundated by normal tidal action. In contrast, white mangroves and buttonwoods are usually found at slightly higher elevations, in areas where inundation is less frequent (due primarily to spring tides or severe wind driven "tides"). These fringing mangroves serve both as habitat and as a food source for fiddler crabs, mangrove snapper, and a variety of wading birds, such as herons and egrets. Mangroves also act as a nursery habitat for snook, mullet and seatrout. Many of the shellfishes and

Table 19

Loggerhead Sea Turtle Nesting Data  
for Southern Longboat Key  
Between DNR Monuments R-18 and R-29  
(2.1 Miles)

	1987	1988	1989	1990	1991
Nests	16	12	16	25	31
False Crawls	17	14	16	17	50
% Nesting Success	48.5	46.2	50.0	59.5	38.3
% Hatching Success <i>In Situ</i>	-	-	-	80.0	84.6
% Hatching Success Relocated	75.5	54.2	76.7	63.6	82.9

- indicates that all nests were relocated.
- Date compiled by B. Perry, Sarasota County Natural Resources Department,  
from Mote Marine Laboratory and Sarasota County records.

Table 20

Loggerhead Sea Turtle Nesting Data  
for Lido Key  
Between DNR Monuments R-31 and R-44  
(2.5 Miles)

	1987	1988	1989	1990	1991
Nests	2	3	7	11	23
False Crawls	5	0	11	15	28
% Nesting Success	28.6	100	38.9	42.3	45.1
% Hatching Success <i>In Situ</i>	-	28.6	-	0	78.9
% Hatching Success Relocated	82.9	68.5	51.2	83.6	93.3

- indicates that all nests were relocated.
- Date compiled by B. Perry, Sarasota County Natural Resources Department,  
from Mote Marine Laboratory and Sarasota County records.

finfishes commonly observed near the pass spend at least a portion of their life in the estuarine system (Tables 21 and 22).

The shallow waters of Sarasota Bay once supported several commercial shellfish and finfish fisheries. However, in recent years, commercial harvests of several species have declined or no longer occur. Prior to the mid 1960's, hard clams, oysters and scallops were commercially harvested from Sarasota Bay. Scallops have since disappeared from the bay and have not been commercially harvested since 1964 (Estevez and Merriam, 1989). Commercial oyster landings ended in 1967, whereas, clam landings ended in 1971 (Estevez and Merriam, 1989). Both species, however, are still present in the bay. Harvests of blue crabs and pink shrimp have also declined in recent years, whereas, harvests of stone crab have increased, presumably due to increased demand (Estevez and Merriam, 1989). Present day commercial fisheries within Sarasota Bay include blue crab, pink shrimp, stone crab, baitfish, mullet and spotted seatrout (Estevez and Merriam, 1989).

#### D. Nearshore Gulf of Mexico

The nearshore Gulf of Mexico resource classification includes biotic communities mainly associated with two life zones: littoral (intertidal) and sublittoral (offshore). The littoral zone is inhabited by species of polychaete worms, sand bugs, isopods, amphipods, mole crabs and coquina clams. Organisms common to the sublittoral zone include sand dollars, sea urchins, pelecypod mollusks, sea hares, spider crabs, hermit crabs, various species of shrimp and several gastropod mollusk species. In addition, the coastal waters off both Lido and Longboat Keys contain a wide variety of commercial and sport fishes (Table 22), including tarpon, grouper, red snapper, Spanish mackerel, mullet, amberjack, pompano and bonito.

A side scan sonar survey of the offshore waters immediately adjacent to New Pass was conducted in May 1991. Although preliminary data suggested that hardbottom habitats might exist within the study area (to approximately 1/2 mile offshore), site investigations conducted on October 25, 1991 disproved this hypothesis. The areas identified by the side scan sonar survey were comprised of coarser grain sediments or shell with scattered algal coverage (Figure 31). Potential seagrass and/or algal beds were also identified and confirmed through site investigations. Table 23 provides a listing of the algal and seagrass species identified in the vicinity of New Pass.

Although no hardbottom was observed within the study area, some hardbottom habitat does exist further offshore. Some sparse, ephemeral hardbottom reportedly occurs in the vicinity of a bridge/concrete rubble artificial reef located approximately 2 miles offshore of New Pass (Figure 31) (Anonymous, 1992; Mote Marine, personal communication). A second bridge rubble artificial reef is located approximately 1.7 miles southwest of New Pass. A third artificial reef comprised of concrete rubble is located approximately two miles northwest of Big Sarasota Pass. These hardbottom areas and artificial reefs reportedly support some hardbottom fauna, including stony corals, sponges and

Table 21

Invertebrates Commonly Observed  
in the Vicinity of  
New Pass, Florida

Scientific Name	Common Name
<u>Abra aequalis</u>	common Atlantic abra
<u>Anadara transversa</u>	transverse ark
<u>Amygdalum papyrium</u>	paper mussel
<u>Anomalocardia auberiana</u>	pointed venus
<u>Bivalvia sp.</u>	unidentified bivalve
<u>Carditamera floridana</u>	broad-ribbed cardita
<u>Chione cancellata</u>	cross-barred venus
<u>Crassinella lunulata</u>	lunate crassinella
<u>Diplodonta punctata</u>	common Atlantic diplodon
<u>Laevicardium mortoni</u>	Morton's egg cockle
<u>Lucina nassula</u>	woven lucina
<u>Lucina radians</u>	dosinia-like lucina
<u>Lucina sp.</u>	unidentified lucina
<u>Lyonsia hyalina floridana</u>	Florida glassy lyonsia
<u>Macoma sp.</u>	unidentified macoma
<u>Macoma tenta</u>	narrowed macoma
<u>Mercenaria campechiensis</u>	southern quahog
<u>Mysella planulata</u>	Atlantic flat lepton
<u>Neaeromya floridana</u>	giant montacuta
<u>Parastarte triquerta</u>	brown gem clam
<u>Perploma margaritarem</u>	unequal spoon clam
<u>Semele nuculoides</u>	tiny semele
<u>Tagelus divisus</u>	purplish tagelus
<u>Tagelus plebeius</u>	stout tagelus
<u>Tellina sp.</u>	unidentified tellin
<u>Tellina tampaensis</u>	Tampa tellin
<u>Tellina texana</u>	Texas tellin
<u>Tellina versicolor</u>	pink tellin
<u>Callinectes sapidus</u>	blue crab
<u>Menippe mercenaria</u>	stone crab
<u>Penaeus duorarum</u>	pink shrimp
<u>Panulirus argus</u>	spiny lobster
<u>Crassostrea virginica</u>	eastern oyster
<u>Macrocallista nimbosa</u>	sunray venus

Table 21  
(continued)

Invertebrates Commonly Observed  
in the Vicinity of  
New Pass, Florida

<u>Scientific Name</u>	<u>Common Name</u>
<u>Dinocardium robustum</u>	cockle
<u>Periclemenes longicaudatus</u>	cleaning shrimp
<u>Hippolyte spp.</u>	broken-back shrimp
<u>Tozeuma carolinense</u>	arrow shrimp
<u>Palaemonetes pugio</u>	grass shrimp

Compiled from: Sarasota County Coastal Zone Management, Division of Natural Resources Management, 1985.

U.S. Fish and Wildlife Service, 1982.

Clarke, 1980.

Estevez, E.D. and D.A. Bruzek, 1986

Table 22

Fishes Commonly Observed  
in the Vicinity of  
New Pass, Florida

<u>Scientific Name</u>	<u>Common Name</u>
<u>Sphyrna tiburo</u>	bonnethead
<u>Dasyatis sabina</u>	Atlantic stingray
<u>Gymnura micrura</u>	smooth butterfly ray
<u>Raja eglanteria</u>	clearnose skate
<u>Elops saurus</u>	ladyfish
<u>Anguilla rostrata</u>	American eel
<u>Brevoortia patronus</u>	gulf menhaden
<u>Harengula jaguana</u>	scaled sardine
<u>Sardinella anchovia</u>	Spanish sardine
<u>Anchoa hepsetus</u>	striped anchovy
<u>Synodus foetens</u>	inshore lizardfish
<u>Arius felis</u>	sea catfish
<u>Bagre marinus</u>	gafftopsail catfish
<u>Porichthys plectrodon</u>	Atlantic midshipman
<u>Gobiesox strumosus</u>	skilletfish
<u>Ogcocephalus corniger</u>	longnose batfish
<u>Ophidion welsbi</u>	crested cusk-eel
<u>Menidia peninsulae</u>	tidewater silverside
<u>Syngnathidae</u>	pipefish, unidentified
<u>Hippocampus erectus</u>	lined seahorse
<u>Centropomus undecimalis</u>	snook
<u>Diplectrum formosum</u>	sand perch
<u>Echeneis naucrates</u>	sharksucker
<u>Caranx hippos</u>	crevalle jack
<u>Chloroscombrus chrysurus</u>	Atlantic bumper
<u>Decapterus punctatus</u>	round scad
<u>Hemicaranx amblyrhynchus</u>	bluntnose jack
<u>Selene vomer</u>	lookdown
<u>Trachinotus carolinus</u>	Florida pompano
<u>Trachinotus falcatus</u>	permit
<u>Lutjanus synagris</u>	lane snapper
<u>Eucinostomus gula</u>	silver jenny
<u>Pomadasyidae</u>	grunt, unidentified
<u>Orthopristis chrysoptera</u>	pigfish
<u>Archosargus probatocephalus</u>	sheepshead
<u>Lagodon rhomboides</u>	pinfish
<u>Bairdiella chrysoura</u>	silver perch

Table 22  
(continued)

Fishes Commonly Observed  
in the Vicinity of  
New Pass, Florida

Scientific Name	Common Name
<u>Cynoscion arenarius</u>	sand seatrout
<u>Leiostomus xanthurus</u>	spot
<u>Menticirrhus</u> spp.	juveniles, unidentified
<u>Menticirrhus americanus</u>	southern kingfish
<u>Menticirrhus littoralis</u>	gulf kingfish
<u>Micropogon undulatus</u>	Atlantic croaker
<u>Pogonias cromis</u>	black drum
<u>Sciaenops ocellatus</u>	red drum
<u>Chaetodipterus faber</u>	Atlantic spadefish
<u>Scomberomorus maculatus</u>	Spanish mackerel
<u>Peprilus alepidotus</u>	harvestfish
<u>Peprilus burti</u>	butterfish-gulf
<u>Scorpaena brasiliensis</u>	barbfish
<u>Prionotus scitulus</u>	leopard searobin
<u>Prionotus tribulus</u>	bighead searobin
<u>Ancylopsetta quadrocellata</u>	ocellated flounder
<u>Citharichthys macrops</u>	spotted whiff
<u>Citharichthys spilopterus</u>	bay whiff
<u>Etropus crossotus</u>	fringed flounder
<u>Paralichthys albigutta</u>	gulf flounder
<u>Syacium papillosum</u>	dusky flounder
<u>Achirus lineatus</u>	lined sole
<u>Symphurus plagiusa</u>	blackcheck tonguefish
<u>Aluterus schoepfi</u>	orange filefish
<u>Lactophyrus quadricornis</u>	scrawled cowfish
<u>Lagocephalus laevigatus</u>	smooth puffer
<u>Sphoeroides nephelus</u>	southern puffer
<u>Chilomycterus schoepfi</u>	striped burrfish
<u>Cynoscion nebulosus</u>	spotted seatrout
<u>Cynoscion arenarius</u>	sand seatrout
<u>Mugil cephalus</u>	striped mullet
<u>Pomatomus saltatrix</u>	bluefish
<u>Rachycentron canadum</u>	cobia

Table 22  
(continued)

Fishes Commonly Observed  
in the Vicinity of  
New Pass, Florida

Scientific Name	Common Name
<u>Megalops atlantica</u>	tarpon
<u>Epinephelus morio</u>	red grouper
<u>Lutjanus griseus</u>	gray snapper
<u>Epinephelus itajara</u>	jewfish
<u>Mugil curema</u>	white mullet
<u>Diapterus plumieri</u>	striped mojarra
<u>Opisthonema oglinum</u>	Atlantic thread herring

Compiled from: U.S. Fish and Wildlife Service, 1982

Holland, et al., 1980

Field surveys conducted by Coastal Planning & Engineering, Inc.

Table 23

Algae and Seagrasses Commonly Observed  
Near New Pass, Florida

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Chlorophyceae - Green Algae

Caulerpales

Caulerpa mexicana

Caulerpa prolifera

Caulerpa cupressoides

Ulvaes

Ulva lactuca (sea lettuce)

Phaeophyceae - Brown Algae

Dictyotales

Dictyota dichotoma v. menstrualis

Rhodophyceae - Red Algae

Ceramiales

Wrangelia argus

Spyridia filamentosa

Acanthophora spicifera

Dasya sp. (D. corymbifera?)

Unidentified tufted red algae

Gigartinales

Hypnea cervicornis

Hypnea musciformis

Hypnea cornuta

Gracilaria tikvahiae

Gracilaria mammillaris

Gracilaria sp. (G. verrucosa or G. cylindrica?)

Angiospermae - Flowering plants

Butomales

Thalassia testudinum (turtle grass)

Najadales

Halodule beaudettei (Halodule wrightii) (shoal grass)

Syringodium filiforme (manatee grass)

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Based on Coastal Planning & Engineering, Inc. field surveys

? - Indicates that the exact species identification could not be confirmed. Collected specimens lacked the reproductive structures necessary for proper identification.

gorgonians (Mote Marine, personal communication). These areas, however, are not expected to be impacted by the proposed inlet management plan and will not be discussed in any great detail.

#### E. Endangered Species

A list of threatened, endangered, and species of special concern which are reported to occur in the vicinity of New Pass is presented in Table 24. Additional threatened, endangered or rare species which may occasionally be found on the west coast of Florida include the Atlantic bottlenosed dolphin, short-finned pilot whale, humpback whale and sperm whale.

Table 24

Threatened, Endangered and Species of  
Special Concern Reported to Occur in the  
Vicinity of New Pass

Common Name	Scientific Name	Status	
		FGFWFC	USFWS
<u>Birds</u>			
Arctic peregrine falcon	<u>Falco peregrinus tundris</u>	E	T
Least tern	<u>Sterna antillarum</u>	T	
Snowy egret	<u>Egretta thula</u>	SSC	
Reddish egret	<u>Egretta rufescens</u>	SSC	
Tricolored heron	<u>Egretta tricolor</u>	SSC	
Brown pelican	<u>Pelecanus occidentalis</u>	SSC	
Bald eagle	<u>Haliaeetus leucocephalus</u>	T	E
Little blue heron	<u>Egretta caerulea</u>	SSC	
Southeastern snowy plover	<u>Charadrius alexandrinus</u> <u>tenuirostris</u>	T	
Wood stork	<u>Mycteria americana</u>	E	E
<u>Reptiles</u>			
Atlantic loggerhead turtle	<u>Caretta caretta</u>	T	T
Atlantic green turtle	<u>Chelonia mydas</u>	E	E
Leatherback turtle	<u>Dermochelys coriacea</u>	E	E
Atlantic hawksbill turtle	<u>Eretmochelys imbricata</u> <u>imbricata</u>	E	E
Atlantic ridley turtle	<u>Lepidochelys kemp</u>	E	E
<u>Mammals</u>			
West Indian manatee	<u>Trichechus manatus</u> <u>latirostris</u>	E	E
<u>Fishes</u>			
Common snook	<u>Centropomus undecimalis</u>	SSC	

Compiled from: Hartman, 1989.  
USFWS, 1990.  
FGFWFC, 1991.